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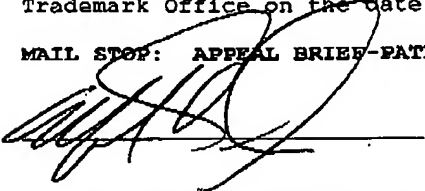
APR 21 2006

Docket No.: E-80366

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MAIL STOP: APPEAL BRIEF-PATENTS


April 21, 2006IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Applic. No. : 10/823,986 Confirmation No.: 5321
Inventor : Rolf Brück
Filed : April 13, 2004
Title : Filter Assembly, Process for Producing the
Filter Assembly and Filter Body Having the
Filter Assembly
TC/A.U. : 1724
Examiner : Mainh Chau Thi
Customer No. : 24131

Hon. Commissioner for Patents
Alexandria, VA 22313-1450

BRIEF ON APPEAL

S i r :

This is an appeal from the final rejection in the Office
action dated November 18, 2005, finally rejecting claims 1-33.

Payment in the amount of \$500.00 to cover the fee for filing
the *Brief on Appeal* is included.

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Real Party in Interest:

This application is assigned to EMITEC Gesellschaft für Emissionstechnologie mbH of Lohmar, Germany. The assignment will be submitted for recordation upon the termination of this appeal.

Related Appeals and Interferences:

No related appeals or interference proceedings are currently pending which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 1-33 are rejected and are under appeal.

Status of Amendments:

No claims were amended after the final Office action. A *Final Response* under 37 CFR § 1.116 was filed on January 18, 2006. The Primary Examiner stated in an *Advisory Action* dated January 31, 2006 that the request for reconsideration had been considered but did not place the application in condition for allowance.

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Summary of the Claimed Subject Matter:

As stated in the first paragraph on page 1 of the specification of the instant application, the invention relates to a filter assembly through which a fluid can flow. The invention also relates to a filter body for purifying or cleaning an exhaust-gas stream from an internal combustion engine, which is constructed by using the filter assembly according to the invention. Furthermore, the invention relates to a process for producing a filter assembly.

Appellants stated on page 25 of the specification, line 20, that, referring now to the figures of the drawings in detail and first, particularly, to Fig. 1 thereof, there is seen a diagrammatic and perspective view of an embodiment of a filter assembly 1 according to the invention with two covering layers 2. The covering layers 2 are composed at least in part of a porous material (see the dotted region) and each have two boundary regions 3 on opposite sides. Furthermore, the filter assembly 1 includes a fiber layer 4 formed from a fiber fabric. The two covering layers 2 form a sleeve 31 which surrounds the fiber layer 4, so that the fiber layer 4 is disposed captively inside the two covering layers 2. The two covering layers 2 are connected to one another by technical

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joining (at a connection 22). The two covering layers 2 are, in particular, brazed or welded to one another in the boundary regions 3 close to an edge 6.

Appellants further stated on page 26 of the specification, line 23, that, Fig. 2 diagrammatically depicts a sectional view through a further embodiment of a filter assembly 1, the latter having just one covering layer 2 which forms the sleeve 31. The covering layer 2 has at least one boundary region 3 and an opposite deformation region 32. The covering layer 2 is connected to itself by technical joining in the boundary region 3. The connection by technical joining in this case is ensured through the use of a brazing material 8, with a brazing material stop 23 being provided outside the boundary region 3, preventing the brazing material 8 from reaching the vicinity of the fiber layer 4 during a heat treatment. In the illustrated embodiment, brazing material 8 is provided in the inside of the deformation region 32, and in this case too it is optionally possible to provide a brazing material stop 23. The boundary region 3 extends from an edge 6 of the covering layer 2 over a boundary width 7 of preferably between 3 and 15 mm.

Appellants finally stated on page 33 of the specification, line 25, that, the filter assembly described herein and the

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filter body which it is used to construct are particularly suitable for installation close to the engine in mobile exhaust systems. The proposed filter assembly is able to permanently withstand the high pressure loads which occur there due to the proximity to the combustion chamber and the high temperatures of up to 700°C, and from time to time even up to 1000°C, since the fiber layer is at least partially surrounded, in a form-locking manner, by a protective sleeve formed by at least one covering layer. This prevents the fiber layer from exhibiting detachment phenomena after even just a short time. The proposed process is very simple and can be carried out reliably and without major technical difficulties even in large-series production, as is customary for automotive engineering.

Grounds of Rejection to be Reviewed on Appeal

1. Whether or not claims 1-33 are obvious over Breuer et al.

(U.S. Patent No. 5,322,672) (hereinafter "Breuer") in view of Wickland (U.S. Patent No. 6,355,078 B1) and further in view of Li et al. (U.S. Patent No. 6,413,589 B1) (hereinafter "Li") under 35 U.S.C. §103.

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Argument :

Whether or not claims 1-33 are obvious over Breuer in view of Wickland and further in view of Li under 35 U.S.C. §103.

Claims 1-33 are not obvious over Breuer in view of Wickland and further in view of Li under 35 U.S.C. §103:

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1 and 24 call for, *inter alia*:

providing at least one covering layer formed with a given porosity and a resistance to temperatures of over 200°C ... and placing at least one fiber layer made of a fiber fabric and having a resistance to temperatures of over 200°C on the at least one covering layer, and forming a sleeve with the at least one covering layer surrounding the at least one fiber layer.

It is noted that the assignee of the instant application is also the corporate assignee of the Breuer reference. Therefore appellant is very familiar with the Breuer reference.

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The Breuer reference discloses a honeycomb body assembly made of metal sheets forming a stack with a plurality of channels through which a fluid can flow (abstract).

The Wickland reference discloses a bag for containing nuclear waste including a filter media (52). The filter media (52) is disclosed as being a HEPA filter, the material of the HEPA filter is a proprietary split polypropylene fiber material (column 3, lines 39-42).

The Li reference discloses a method of coating a ceramic and bonding ceramic to a substrate (abstract).

As will be seen from the following remarks, the Examiner's response to arguments on pages 3-5 of the final Office action is not accurate at all.

A person of ordinary skill in the art is not provided with any disclosure as to how the filter media of Wickland is to be made temperature resistant nor are they provided with any disclosure as to how to combine the polypropylene filter media with the metal sheets disclosed by Breuer. Therefore, a person of ordinary skill in the art attempting to combine the references would be forced to change the polypropylene

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material of Wickland and/or to find a method of combining the material of Wickland with the metal sheets of Breuer. Accordingly, it is not obvious for a person of ordinary skill in the art to adopt the filter media of Wickland for modifying Breuer. Therefore, a person of ordinary skill in the art is not provided with any motivation to modify Breuer based on the disclosure of Wickland, to arrive at the present invention as claimed.

Furthermore, the Breuer reference and the Wickland reference are non-analogous art with respect to one another, because they meet the criteria for non-analogous art. More specifically, they are not from the same field of endeavor and the Wickland reference is not pertinent to the problem to be solved.

Similar to the present invention, the Breuer reference pertains to honeycomb bodies that are used in the exhaust systems of internal combustion engines. However, the Wickland reference pertains to a bag for containing nuclear waste material. Because Breuer pertains to the field of internal combustion engine exhaust system and Wickland pertain to nuclear waste storage, Breuer and Wickland are not from the same field of endeavor. Furthermore, Wickland is not pertinent to the problem to be solved. Particularly, a person

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of ordinary skill in the art looking for a filter for the honeycomb body of Breuer would look for a filter that has specific properties (i.e. capable of high functioning at high temperature levels, ability to be attached to the metal structure of Breuer, filtering a certain particulate size, etc.). The filter disclosed by Wickland does not meet the specific properties of a filter that would be required and thus would not be considered or even found by a person of ordinary skill in the art. Accordingly, the Wickland reference does not meet the two criteria for being analogous art with respect to Breuer. Therefore, the Wickland reference is non-analogous with respect to Breuer and the present invention.

Moreover, appellants disagree with the Examiner's comments in the last paragraph on page 5 of the Office action pertaining the fiber layer and the cover layer being resistant to temperatures of over 200° C. Particularly, the Examiner cites that "it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations." The citation explicitly states where a prior art apparatus satisfies the claimed structural limitations. The citation does not pertain to a combination of prior art apparatuses

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satisfying the claimed structural limitations. The Breuer reference does not satisfy the structural limitations of the instant application and thus Breuer is not a prior art reference that satisfies the structural limitations. It is precisely for this reason that the Examiner uses the Wickland reference in the obviousness rejection. Accordingly, in the present case, a prior art apparatus does not satisfy the claimed structural limitations. Accordingly, the Examiner's remarks pertaining to the above-noted citation are not applicable here. Therefore, it is respectfully believed that the Examiner's remarks pertaining to the cover layer and the fiber layer being resistant to 200° C are not accurate. The honorable Board is therefore respectfully requested to disregard the Examiner's comments.

Furthermore, a person of ordinary skill in the art is not provided with any motivation to use the disclosure of Lee, directed to a method of coating a ceramic and bonding ceramic to a substrate, to modify the material disclosed in Wickland and implement the material in the assembly disclosed by Breuer. Accordingly, Lee does not make up for the deficiencies of Breuer and Wickland.

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It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest all the claim limitations.

As seen from the above-given remarks, the references do not show or suggest providing at least one covering layer formed with a given porosity and a resistance to temperatures of over 200°C ... and placing at least one fiber layer made of a fiber fabric and having a resistance to temperatures of over 200°C on the at least one covering layer, and forming a sleeve with the at least one covering layer surrounding the at least one fiber layer, as recited in claims 1 and 24 of the instant application.

The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, it is believed that the Examiner has not produced a *prima facie* case of obviousness.

Moreover, a critical step in analyzing the patentability of claims pursuant to 35 U.S.C. § 103 is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See In re Dembiczak, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). Close adherence to this methodology is especially important in

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cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher." Id. (quoting W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

Most if not all inventions arise from a combination of old elements. See In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453,1457 (Fed. Cir. 1998). Thus, every element of a claimed invention may often be found in the prior art. See id. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See id. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the appellant. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 163.5, 1637 (Fed. Cir. 1998); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125,1127 (Fed. Cir. 1984).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the

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problem to be solved. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. See WMS Gaming, Inc. v. International Game Tech., 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999). The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) (and cases cited therein). Whether the examiner relies on an express or an implicit showing, the examiner must provide particular findings related thereto. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. Broad conclusory statements standing alone are not "evidence." Id. When an examiner relies on general knowledge to negate patentability, that knowledge must be articulated and placed on the record. See In re Lee, 277 F.3d 1338, 1342-45, 61 USPQ2d 1430, 1433-35 (Fed. Cir. 2002).

Applicant respectfully believes that any teaching, suggestion, or incentive possibly derived from the prior art is only present with hindsight judgment in view of the instant application. "It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using

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the applicant's structure as a template and selecting elements from references to fill the gaps. . . . The references themselves must provide some teaching whereby the applicant's combination would have been obvious." In re Gorman, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (emphasis added). Here, no such teaching is present in the cited references.

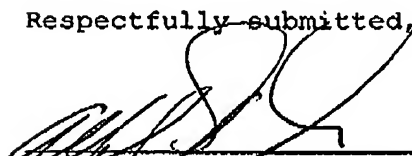
Upon evaluation of the Examiner's comments, it is respectfully believed that the evidence adduced by the Examiner is insufficient to establish a prima facie case of obviousness with respect to the claims. Accordingly, the Examiner is requested to withdraw the rejection.

Since claims 1 and 24 are believed to be allowable, dependent claims 2-23 and 25-33 are believed to be allowable as well.

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Based on the above given remarks, the honorable Board is
therefore respectfully urged to reverse the final rejection of
the Primary Examiner.

Respectfully submitted,



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Claims Appendix:

1. A filter assembly through which a fluid can flow, the filter assembly comprising:

at least one fiber layer made from a fiber fabric; and

at least one covering layer formed from at least partially porous material, said at least one covering layer having at least one boundary region, and said at least one covering layer forming a sleeve surrounding said at least one fiber layer and captively holding said at least one fiber layer inside said at least one covering layer;

said fiber layer and said covering layer being resistant to temperatures of over 200°C.

2. The filter assembly according to claim 1, wherein said at least one covering layer forming said sleeve is one covering layer having said at least one boundary region and an opposite deformation region, said covering layer being connected to itself by technical joining in said at least one boundary region.

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3. The filter assembly according to claim 1, wherein said at least one covering layer is at least two covering layers forming said sleeve, said at least two covering layers being connected to one another by technical joining in said at least one boundary region, and said at least one fiber layer being disposed captively between said at least two interconnected covering layers.

4. The filter assembly according to claim 1, wherein said at least one covering layer has a reduced porosity in said at least one boundary region, relative to a remaining region.

5. The filter assembly according to claim 1, wherein said at least one covering layer has no porosity in said at least one boundary region, relative to a remaining region.

6. The filter assembly according to claim 1, wherein said at least one covering layer is a metal foil with a thickness of less than 0.04 mm.

7. The filter assembly according to claim 1, wherein said at least one covering layer is a metal foil with a thickness of less than 0.03 mm.

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8. The filter assembly according to claim 1, wherein said at least one covering layer is a metal foil with a thickness of less than 0.02 mm.

9. The filter assembly according to claim 1, wherein said at least one covering layer and said at least one fiber layer together have a mean porosity of greater than 70%.

10. The filter assembly according to claim 1, wherein said at least one covering layer and said at least one fiber layer together have a mean porosity of greater than 90%.

11. The filter assembly according to claim 2, wherein said at least one covering layer has an edge, and said at least one boundary region extends from said edge over a boundary width of between 3 mm and 15 mm.

12. The filter assembly according to claim 2, wherein said at least one covering layer has at least at two opposite edges, and said at least one boundary region extends from said at least two opposite edges over boundary widths of between 3 mm and 15 mm.

13. The filter assembly according to claim 3, wherein said at least one covering layer has an edge, and said at least

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one boundary region extends from said edge over a boundary width of between 3 mm and 15 mm.

14. The filter assembly according to claim 3, wherein said at least one covering layer has at least at two opposite edges, and said at least one boundary region extends from said at least two opposite edges over boundary widths of between 3 mm and 15 mm.

15. The filter assembly according to claim 2, wherein said connection of said covering layer by technical joining is a brazed connection.

16. The filter assembly according to claim 3, wherein said connection of said at least two covering layers by technical joining is a brazed connection.

17. The filter assembly according to claim 1, wherein said at least one fiber layer has a first length and a first width, said at least one covering layer has a second length and a second width, and at least one of said first length and said first width being less than at least one of said second length and said second width.

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18. The filter assembly according to claim 1, wherein said at least one fiber layer has a dimension of from 0.01 mm to 1 mm.

19. The filter assembly according to claim 1, wherein said at least one covering layer has at least one flow-guiding surface.

20. A filter body for cleaning an exhaust-gas stream from an internal combustion engine, the filter body comprising:

a casing; and

at least one filter assembly according to claim 1 at least partially disposed in said casing and forming passages.

21. The filter body according to claim 20, wherein said at least one filter assembly corresponds to a honeycomb structure having said passages.

22. The filter body according to claim 20, wherein said passages are at least partially narrowed.

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23. The filter body according to claim 20, wherein said at least one covering layer at least in part has a structure substantially delimiting said passages.

24. A process for producing a filter assembly through which a fluid can flow, the process comprising the following steps:

providing at least one covering layer formed with a given porosity and a resistance to temperatures of over 200°C, the at least one covering layer having at least one boundary region formed with a porosity less than the given porosity;

placing at least one fiber layer made of a fiber fabric having a resistance to temperatures of over 200°C on the at least one covering layer;

forming a sleeve with the at least one covering layer surrounding the at least one fiber layer; and

forming a connection by technical joining in the at least one boundary region, captively fixing the at least one fiber layer within the at least one covering layer.

25. The process according to claim 24, wherein the at least one boundary region is non-porous.

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26. The process according to claim 24, which further comprises carrying out the step of forming the sleeve by deforming the at least one covering layer.

27. The process according to claim 26, which further comprises carrying out the step of deforming the at least one covering layer by a deforming method selected from the group consisting of bending, creasing and folding the at least one covering layer in a deformation region.

28. The process according to claim 24, which further comprises carrying out the step of forming the sleeve by placing the at least one fiber layer between two covering layers, with the boundary regions of the covering layers being at least partly directly superimposed on one another.

29. The process according to claim 24, which further comprises introducing a structure into the at least one covering layer before the step of placing the at least one fiber layer on the at least one covering layer.

30. The process according to claim 24, which further comprises carrying out the step of forming the sleeve by using two covering layers, and successively introducing a

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structure into the two covering layers over time, each producing a different structure.

31. The process according to claim 24, which further comprises carrying out the step of forming the connection by technical joining through the use of a welding operation.

32. The process according to claim 24, which further comprises carrying out the step of forming the connection by technical joining through the use of a brazing operation.

33. The process according to claim 24, which further comprises providing the at least one covering layer with a brazing material stop outside the at least one boundary region.

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Evidence Appendix:

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or any other evidence has been entered by the Examiner and relied upon by appellant in the appeal.

(if a 1.131 or 32 Declaration was filed in this application, it must be appended to the Brief on Appeal).

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Related Proceedings Appendix:

1

Since there are no prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal, no copies of decision rendered by a court or the Board are available.

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